

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
28 April 2005 (28.04.2005)

PCT

(10) International Publication Number  
**WO 2005/038260 A1**

(51) International Patent Classification<sup>7</sup>: F04D 7/04, 29/44

(21) International Application Number:

PCT/SE2004/001503

(22) International Filing Date: 20 October 2004 (20.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0302752-1 20 October 2003 (20.10.2003) SE

(71) Applicant (for all designated States except US): ITT MANUFACTURING ENTERPRISES INC. [US/US]; 1105 North Market Street, WILMINGTON, DE 19801 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): LINDSKOG, Martin [SE/SE]; Buddes Gränd 6, S-131 61 NACKA (SE).

(74) Agent: DR LUDWIG BRANN PATENTBYRÅ AB; Box 17192, S-104 62 STOCKHOLM (SE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

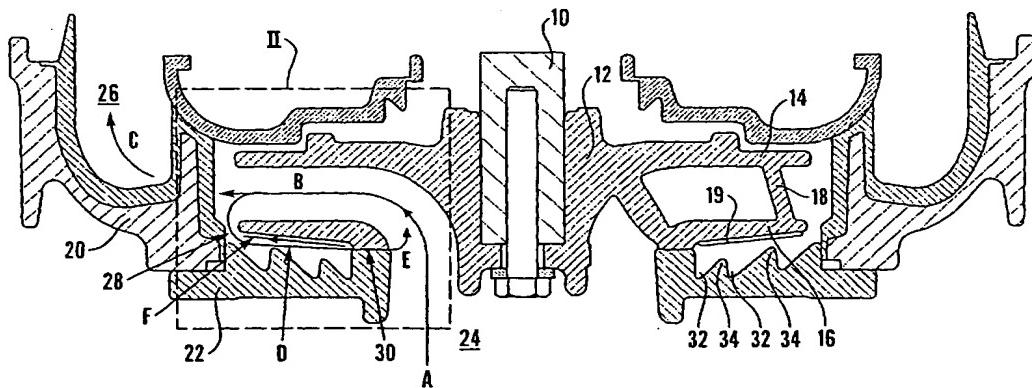
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CENTRIFUGAL PUMP



(57) Abstract: The present invention relates to a centrifugal pump for pumping of liquids containing pollutions mainly in the form of solid particles, which pump comprises a drive unit, a hydraulic unit, whereby the hydraulic unit comprises a pump housing (20) and a pump impeller (12) rotationally arranged inside the housing, the pump impeller comprising an upper (14) and a lower (16) cover disc and a number of intermediate vanes (18). The invention is characterised in that a bottom wall (22) of the pump housing, having a central inlet opening (24), is arranged with at least one spirally extending back flow affecting means (32, 34) on the side facing the lower cover disc extending parts of or full turns around the inlet opening.

WO 2005/038260 A1